

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

REC'D 12 JUL 2005

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MS

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing
(day/month/year) 30 JUNE 2005 (30.06.2005)Applicant's or agent's file reference
PN-28543

FOR FURTHER ACTION

See paragraph 2 below

International application No.
PCT/KR2005/000600International filing date (day/month/year)
04 MARCH 2005 (04.03.2005)Priority date (day/month/year)
04 MARCH 2004 (04.03.2004)

International Patent Classification (IPC) or both national classification and IPC

IPC7 H04B 7/26

Applicant

SK TELECOM CO., LTD. et al

1. This opinion contains indications relating to the following items:

Box No. I Basis of the opinion
 Box No. II Priority
 Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 Box No. IV Lack of unity of invention
 Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 Box No. VI Certain documents cited
 Box No. VII Certain defects in the international application
 Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later. For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/KR

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Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

This opinion has been established on the basis of a translation from the original language into the following language, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).

2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

a sequence listing
 table(s) related to the sequence listing

b. format of material

in written format
 in computer readable form

c. time of filing/furnishing

contained in the international application as filed.
 filed together with the international application in computer readable form.
 furnished subsequently to this Authority for the purposes of search.

3. In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

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Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1 - 35	YES
	Claims	NONE	NO
Inventive step (IS)	Claims	1-11, 14, 16, 24-35	YES
	Claims	12, 13, 15, 17-23	NO
Industrial applicability (IA)	Claims	1 - 35	YES
	Claims	NONE	NO

2. Citations and explanations :

1. NOVELTY AND INVENTIVE STEP

Reference is made to the following documents:

D1 : WO 2004/014011 A2 (MOTÖROLA INC. ET AL.) 12 February 2004
 D2 : EP 1119212 A2 (SAMSUNG ELECTRONICS CO., LTD.) 25 July 2001
 D3 : US 2001/0007552 A1 (LEONARD N. SCHIFF ET AL.) 12 July 2001
 D4 : EP 1102506 A1 (HYUNDAI ELECTRONICS INDUSTRIES CO., LTD.) 23 May 2001
 D5 : EP 1213941 A2 (SK TELECOM CO., LTD.) 12 June 2002

D1 discloses a method for controlling handoff of a mobile station (MS) in a dual-mode communication network. (D1, page 6 line 18 – page 7 line 1) comprising the step of transmitting a notification message from the first base station to the mobile station via a communication channel. Here the notification message notifies the mobile station to operate in accordance to the second communication protocol (i.e. handoff instruction message). As a result, the MS and the second base station may operate in accordance with the second protocol. (D1, page 5 line 13 – page 6 line 17)

D2 discloses a device and a method for performing handoff from asynchronous mobile communication system to synchronous communication system. In D2, the mobile station can select either the DC system or the MC (synchronous) module by way of the switches according to the operational mode. And, if the mobile station intends to acquire the timing of the synchronous system, it turns the first switch to the MC module.

D3 discloses a handoff technique in which a user requests a forward link channel in a new service area when a detected signal strength for the new service area exceeds predetermined threshold levels. In D3, to minimize the burden on system resources, new service area signals are not selectable until a minimum time has passed. (D3, abstract) However, D3 does not disclose the step of operating the synchronous modem after the lower power state of the signal which is received from the asynchronous communication network has been maintained.

(Continued on Supplemental Box)

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Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of:

(Continuation of Box No. V)

D4 discloses a method for performing handoff between asynchronous base station and synchronous base station by using compress mode message. (D4, abstract)

D5 discloses a handoff method of dual-mode mobile terminal between the different mobile communication systems. In D5, a dual-mode terminal transmits information of its capacity operable in both the synchronous and the asynchronous network systems to the mixed communication network. (D5, abstract)

The subject matter of claim 12 differs from D1 in that the mobile terminal monitors system information from the asynchronous mobile communication network and checks preset parameter values in the monitored system information in order to determine whether to perform mode switching. However, the difference is obvious to the skilled person in a mobile communication system because the difference is only a design modulation. Therefore, claim 12 is considered to lack an inventive step.

Claim 15 discloses all the features of claim 12 except using overhead message instead of the system information. Therefore, claim 15 is considered to lack an inventive step. (see claim 12)

The additional feature of claim 13 and claim 17 which respectively refers to claim 12 and claim 15 is a simple design option. Therefore, claim 13 and claim 17 are considered to lack an inventive step.

The subject matter of claim 18 differs from D2 in that the mode switch controller of claim 18 performs registration of location. However, the difference is obvious to the skilled person in a mobile communication system because the registration of location is a well-known and inevitable function in a mobile communication system. Therefore, claim 18 is considered to lack an inventive step.

The subject matter of claim 19 is derivable from D1 and D2 because claim 19 discloses the procedure of mode switching. The additional features of claim 20 and claim 21 which refer to claim 19 are disclosed in D1 and D2. The additional features of claim 22 and claim 23 which refer to claim 19 are simple design options. Therefore, claims 19-23 are considered to lack an inventive step.

2. INDUSTRIAL APPLICABILITY

The subject matter of claims 1-35 is considered to meet the requirement of PCT Article 33(4) in respect of industrial applicability.